



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,228	03/31/2004	Charles E. Benedict	14630	3874

293 7590 12/21/2006
Ralph A. Dowell of DOWELL & DOWELL P.C.
2111 Eisenhower Ave
Suite 406
Alexandria, VA 22314

EXAMINER

ADAMS, GREGORY W

ART UNIT	PAPER NUMBER
----------	--------------

3652

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/21/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/813,228	BENEDICT ET AL.	
	Examiner	Art Unit	
	Gregory W. Adams	3652	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) 14-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election with traverse of Invention I in the reply filed on October 6, 2006 is acknowledged. The traversal is on the ground(s) that the method cannot be practiced by another and materially different apparatus. The Requirement for Restriction noted that the method invention could be practiced by a materially different apparatus than that disclosed by Applicants apparatus claims. The Applicant responded by arguing that the examiner's proposed apparatus was equivalent to Applicants (See Applicants Arguments Page 3/5, lines 15-21). The issue is whether the process as claimed can be practiced by another and materially different apparatus or by hand. In this case, the method claims do not specifically point out a particular apparatus. Thus, a ground-based inventory system such as taught by a spreader bar attachment on a fork-lift which is materially different than suspending containers from an overhead X-Y lattice work of tracks could be used to stack containers in vertically oriented cells.

The requirement is still deemed proper and is therefore made FINAL.

Claims 14-17 withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention II, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on October 6, 2006.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 3652

Claims 3 & 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is insufficient antecedent basis for the following limitations. Claim 3 recites the limitations "said drive system" in line 4 and "said pinion gears" in line 8, and claim 6 recites the limitation "said means for moveably supporting each of said plurality of said transfer units" in lines 2-3.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

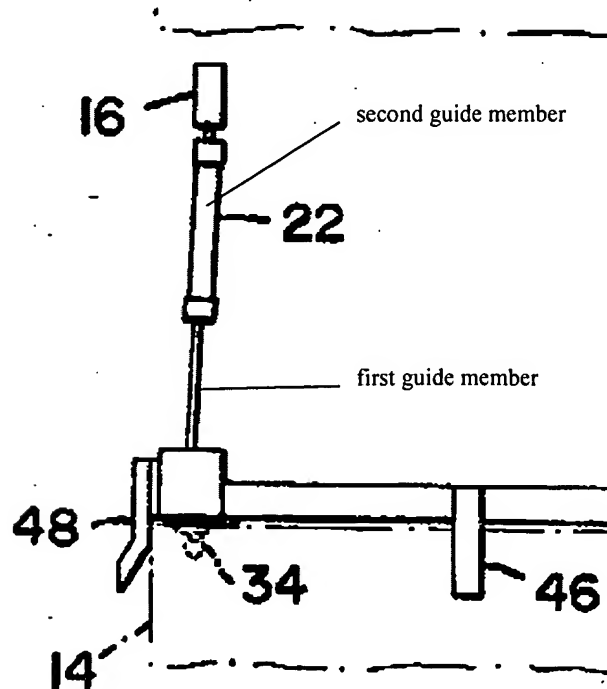
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (JP 07-172317 A) in view of Schwartz/Slater et al. (US 3,513,999) and Nordstrom (US 4,043,285) (previously cited).

With respect to claim 1, Toda discloses an automated material handling and storage system comprising, a grid track system having tracks 2-5, extending transversely with respect to one another in an intersecting pattern (FIG. 1), carriage means 14a for suspending a transfer unit 10 from said grid track system 2-5, one transfer unit (FIG. 16) including selectively engageable drive means 14a for moving in a horizontal plane and side to side, a spreader beam and hoist means 10 for raising and lowering said spreader beam, and means for providing electrical power.

Art Unit: 3652

Toda discloses warehouses and storage, and does not disclose cells in tiers, spreader beam and first and second guide members. Schwartz et al. discloses a spreader beam and a first guide member 22 (see FIG. 9 below) extending upward from a spreader beam 30 and cooperatively engaging at least a second guide member 22 that extends downwardly from a transfer unit 30. Schwartz et al. discloses that first and second guide members properly position a spreader in relation to a container. C1/L40-45. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Toda to include a spreader beam and first and second guide members, as per the teachings of Schwartz et al., to properly position a spreader bar in relation to a container.



Nordstrom discloses columns and tiers (indicated generally as 12, 34, 52) as is common in dense storage of containers. C1/L4-9. Therefore, it would have been obvious to one

Art Unit: 3652

having ordinary skill in the art at the time the invention was made to modify the apparatus of Toda to include columns and tiers, as per the teachings of Nordstrom, as is well known in the art of container storage.

With respect to claim 2, Toda does not disclose a vessel or deck plates.

Nordstrom discloses a vessel 12, a grid track system 62, 64 being mounted above cells at a vertical height to permit movement of at least one transfer unit and a spreader beam, and a plurality of deck plates 24 mounted above said grid track system as is well known when transferring a densely stored container inventory shipboard which eliminates the need for dock-side removal means which are limited. C1/L25-35, 55-60. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Toda to include vessel and deck plates, as per the teachings of Nordstrom, as per the teachings of Nordstrom, as is well known when transferring a highly dense store of containers and removing the need for capacity-constrained shore mounted cranes.

Claims 3-9 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (JP 07-172317 A) in view of Schwartz/Slater et al. (US 3,513,999), Nordstrom (US 4,043,285) and Kurosaki (JP 60-093006 A).

With respect to claims 3-4 & 7, Toda discloses a drive motor 33, and does not disclose rack members extending along tracks and pinion gears. Kurosaki discloses rack members 12, a drive system including at least one drive motor (indicated generally as 4) that is drivingly connected to gears 33 and means for selectively engaging pinion gears with rack members, and further discloses one drive motor that drives gears

Art Unit: 3652

engaging a first set of tracks 11 extending in an X direction and one drive motor that drives gears engaging a set of tracks 12 extending in a Y for the purpose of optimization of floor space through transfer of containers closely arranged within a warehouse.

Kurosaki Abs. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Toda to include rack members extending along tracks and pinion gears, as per the teachings of Kurosaki, to optimize warehouse floor space through dense storage.

With respect to claim 5, Toda discloses a plurality of transfer units operatively mounted to said grid track system.

With respect to claim 6, Toda discloses a plurality of carriages 6 each having roller elements, pilot shaft and means for connecting a pilot shaft to a transfer unit.

With respect to claim 8, Toda discloses includes at least one hoist assembly mounted to said transfer units for controlling movement of said spreader beams.

With respect to claim 9, Toda discloses a motor for X travel and a motor for Y travel or driving gear.

Claims 10-11 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (JP 07-172317 A) in view of Schwartz/Slater et al. (US 3,513,999), Nordstrom (US 4,043,285), Kurosaki (JP 60-093006 A) and Nichtnennung (DE 3103162).

With respect to claim 10, Toda does not disclose a driven gear engaged by a drive gear. Nichtnennung discloses a drive gear 8 that engages a driven gear 15 "to maintain a completely stable position even during asymmetric loading of the platform". Nichtnennung Abstract. Therefore, it would have been obvious to one having ordinary

Art Unit: 3652

skill in the art at the time the invention was made to modify the apparatus of Toda to include driven gears engaged by drive gears, as per the teachings of Nichtnennung, for stable transfer of loads.

With respect to claim 11, Toda discloses guide means. FIG. 2.

Claims 12-13 is/are rejected under 35 U.S.C. 103(a) as being unpatentable over Toda (JP 07-172317 A) in view of Schwartz/Slater et al. (US 3,513,999), Nordstrom (US 4,043,285), Kurosaki (JP 60-093006 A) and Sauerwein (US 6,220,173).

With respect to claims 12-13, Sauerwein discloses inductive power raceway (FIG. 1a) mounted adjacent tracks of a grid track system and collector shoe 20 which reduces power consumption and enables smooth passage through branches without any stopping or braking phase, low wear and decreased maintenance. C1/L45.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the apparatus of Toda to include inductive power raceway mounted adjacent tracks of a grid track system and collector shoe, as per the teachings of Sauerwein, to enable smooth passage through branches without any stopping or braking phase, low wear and decreased maintenance.

Conclusion

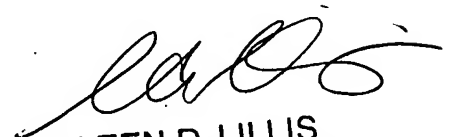
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory W. Adams whose telephone number is (571) 272-8101. The examiner can normally be reached on M-Th., 8:00-5.

Art Unit: 3652

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eileen Lillis can be reached on (571) 272-6928. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

GWA


EILEEN D. LILLIS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600